



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/527,336

10/26/2005

Lars Persson

0104-0510PUS1

3536

2292 7590 09/05/2008  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

DEES, NIKKI H

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

09/05/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,336	<b>Applicant(s)</b> PERSSON ET AL.	
	<b>Examiner</b> Nikki H. Dees	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10 March 2005, 30 January 2007, 30 October 2007</u> .         | 6) <input type="checkbox"/> Other: _____                          |



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 4, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 2 and 4 recite the limitation "the final product". There is insufficient antecedent basis for this limitation in the claim. It is unclear if the final product is meant to refer to the final granular composition or the granulation liquid. For purposes of examination, the final product will be interpreted as referring to the granular composition.

4. Claim 12 provides for the use of sulphuric acid in the production of a granulate, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 5, 8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Conte et al. (3,425,837) with evidence provided by Troeh et al. (Troeh, F. R.; Donahue, R. L. 2003. Dictionary of Agricultural and Environmental Science. p. 360. Blackwell Publishing).

Art Unit: 1794

8. Conte et al. teach a method for the granulation of phosphate rock (col. 1 lines 24-28). Troeh et al. is used to show that rock phosphate comprises calcium and phosphate in the form of apatite. The granulation liquid may comprise sulfuric acid and phosphoric acid (col. 3 lines 44-57). The granulating liquid may further comprise water, and the components are added separately to the granulating device (Example 5). These teachings anticipate Applicant's claims 1, 5, 8, and 10-12.

9. Claims 1, 5, 7, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rupp (1,637,428).

10. Rupp teaches a method for producing a granular calcium phosphate comprising treating a rock phosphate with sulfuric acid (claim 1). The composition is to be used as a mineral feed for domestic animals (p. 1 lines 1-3). The rock phosphate comprises a calcium phosphate, as shown by Troeh et al. above. Limestone is added to the composition, as well as water (p. 1 lines 67-76). The composition is then granulated (p. 1 lines 82-96). These teachings anticipate Applicant's claims 1, 5, 7, and 10-12.

11. Claims 1, 5, and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore (5,019,148).

12. Moore teaches a method for producing a granular composition comprising calcium and phosphorous. The starting material may be phosphate rock, which is known to comprise calcium phosphate (col. 4 lines 41). Acids for use in the granulation include sulfuric and phosphoric (col. 6 lines 36-39). Moore further teaches that calcium

Art Unit: 1794

carbonate (limestone) may be present as a base in the granulation mixture. The calcium carbonate would also provide calcium to the final granular product (col. 6 lines 2-5). Limestone is also taught as a starting material for granulation in Example 2. These teachings anticipate Applicant's claims 1, 5, 7, 8, 11, and 12.

13. Moore further teaches that the granulation may be carried out in a series of several distinct steps. The steps of the process may also be combined into one operation (col. 5 lines 9-19). These teachings anticipate Applicant's claims 9 and 10.

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rupp (1,637,428) in view of Persson et al. (WO 00/24268).

16. Rupp teaches a method for producing a granular composition comprising calcium and phosphorous using sulfuric acid as the granulation liquid as detailed above. Rupp states that calcium sulfate is formed, but does not specifically disclose a percentage of sulfur in the final composition (p. 2 lines 10-12).

17. Persson et al. teach a method for producing a granular composition intended for an animal feed wherein the granulation liquid comprises sulfuric acid and phosphoric

Art Unit: 1794

acid (Example 1). They state that at concentrations above about 5% S in the product, the taste becomes bitter.

18. As the use of sulfuric acid as a granulation liquid was known at the time the invention was made, as well as the undesirable effects of having greater than 5% sulfur present in a granular feed composition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have considered the unfavorable effects of the presence of a large amount of sulfur in the final granular product. One of ordinary skill would have wished to provide a composition comprising sulfur that would have maintained its organoleptic properties in order to ensure its consumption by livestock. To determine the amount of sulfuric acid to use in the granulating liquid to provide a granular composition comprising between 1 and 9 wt % S would not have required undue experimentation on the part of the artisan, and there would have been a reasonable expectation that resultant granular product would have maintained its desirable organoleptic and nutritional properties.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rupp (1,637,428).

20. Rupp teaches a method for producing a granular composition comprising calcium and phosphorous as detailed above.

21. Rupp is silent as to the buffer capacity of his product. However, given that the method of Rupp is the same as the method as claimed by Applicants, absent any convincing arguments or evidence to the contrary, one of ordinary skill would have a



Art Unit: 1794

reasonable expectation that the amount of sulfuric acid used to produce the granular composition as taught by Rupp would result in a buffer capacity in the same range as that claimed by Applicants.

22. Claim 6 is rejected under 35 U.S.C. 103(a) as being obvious over Moore (5,019,148) in view of Jensen et al. (3,464,824).

23. Moore teaches a method for producing a granular composition comprising calcium and phosphorous as detailed above.

24. Moore is silent as to the calcium compound comprising a dicalcium phosphate.

25. Jensen et al. teach a granular feed supplement comprising limestone and dicalcium phosphate. Other ingredients taught include sodium chloride (col. 3 lines 9-14).

26. As the ingredients taught by Jensen et al. for production of a mineral feed supplement comprise many of the same ingredients as taught by Moore in Example 2 for production of a mineral feed supplement, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized dicalcium phosphate as a calcium compound to be granulated. One of ordinary skill would have had a reasonable expectation that the use of dicalcium phosphate in the invention would result in a suitable granular composition comprising calcium and phosphorous. Success would likely not be a product of innovation, but of ordinary skill and common sense.

### ***Double Patenting***

27. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

28. Claims 1 and 8-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5 and 6 of U.S. Patent No. 6,531,167 in view of Moore (5,019,148). The ‘167 patent claims a method for granulating magnesium oxide using a combination of phosphoric acid and sulfuric acid as the granulating liquid (claim 1). Claims 5 and 6 are to the process being performed either with the liquids (sulfuric acid, phosphoric acid, and water) being mixed together before being added to the granulating device (claim 5), or each liquid being added separately to the granulating device (claim 6). The instant claims 1 and 8 are to a method for granulating a calcium and phosphorous containing material using a

Art Unit: 1794

granulating liquid comprising sulfuric and phosphoric acids. Instant claims 9 and 10 are to performing the process either with the liquids (sulfuric acid, phosphoric acid, and water) being mixed together before being added to the granulating device (claim 9), or each liquid being added separately to the granulating device (claim 10).

29. The '167 patent is silent as to producing a granular composition comprising calcium and phosphorous.

30. The '148 patent teaches a method for producing granular compositions wherein acids for use in the granulating liquid include sulfuric and phosphoric (col. 6 lines 36-39). Compounds that may be granulated include phosphate rock (col. 4 lines 39-41), as well as magnesium oxide (col. 6 lines 2-6).

31. As the granulation of calcium containing compounds to produce granulated compositions comprising calcium and phosphorous, as well as granulating liquids comprising sulfuric acid and phosphoric acid, were known in the art at the time the invention was made, one of ordinary skill in the art would have had a reasonable expectation of success when using a granulating liquid comprising sulfuric acid and phosphoric acid to granulate a calcium-containing compound. This would not have required undue experimentation on the part, as no change in the respective function of the elements would have been required for this combination. Further, the combination would have been expected to yield the predictable result of a granulated calcium and phosphorous containing composition.

***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Berger et al. (4,006,253) teach a feed supplement wherein the amounts of sulfuric and phosphoric acid used in the processing are selected based on the amount of sulfur and phosphorous desired in the final product (col. 3 lines 5-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikki H. Dees whose telephone number is (571) 270-3435. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST (second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nikki H. Dees  
Examiner  
Art Unit 1794

/Carol Chaney/

Supervisory Patent Examiner, Art Unit 1794